DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
BROOKLYN, NEW YORK 11252-6700

REPLY TO
ATTENTION OF

MAY 6 2008

CENAD-PSD-P

MEMORANDUM FOR Commander, New York District, ATTN: CENAN-PP

SUBJECT: Review Plan Approval for Ramapo and Mahwah River Basins, New Jersey Flood Damage Reduction General Reevaluation Study

1. Reference:

a. EC 1105-2-408, Peer Review of Decision Documents, 31 May 2005.

b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.

2. The enclosed Review Plan for the Ramapo and Mahwah River Basins, New Jersey Flood Damage Reduction General Reevaluation Study has been prepared in accordance with the referenced guidance.

3. The Plan has been made available for public comment, and any comments received have been incorporated. It is being coordinated with the Flood Risk Management Planning Center of Expertise. The plan currently does not include external peer review.

4. I hereby approve this Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Plan or its execution will require new written approval from this office.

Encl

Joseph R. Vietri
Chief, Planning & Policy Community of Practice
Program Support Division
Programs Directorate

QUALITY CONTROL (QC) AND INDEPENDENT TECHNICAL REVIEW (ITR) PLAN

1.0 PURPOSE

This review plan presents the process that assures quality products for the Ramapo and Mahwah River Basins, New York and New Jersey Flood Damage Reduction General Reevaluation Study. This QC and ITR plan defines the responsibilities and roles of each member on the study and technical review team.

The product to be reviewed by the technical review team is the feasibility-level Ramapo and Mahwah River Basins, New York and New Jersey Flood Damage Reduction General Reevaluation Study. Under the provisions of new U.S. Army Corps of Engineers (USACE) policy, as detailed in EC1105-2-408 dated May 31, 2005, the ITR will be conducted by specialists from organizations outside of the district responsible for the study. ITR will be conducted for all decision documents and will be independent of the technical production of the project. This QC and ITR plan is, by reference, a part of the project management plan.

2.0 APPLICABILITY

This document provides the quality control plan for the Ramapo and Mahwah River Basins, New York and New Jersey Flood Damage Reduction General Reevaluation Study. It identifies quality control processes and independent technical review for all work to be conducted under this study authority, including in-house, sponsor, and contract work.

3.0 REFERENCES

EC 1105-2-408 "Peer Review of Decision Documents" (May 31, 2005)
EC 1105-2-407 "Planning Models Improvement Program: Model Certification" (May 31, 2005)
EC 1105-2-409 "Planning in a Collaborative Environment" (May 31, 2005)
ER 1105-2-100 "Planning Guidance Notebook and Appendices"

4.0 GENERAL PROJECT DESCRIPTION

The Ramapo and Mahwah River Basins (the Basin) is located in Bergen County, New Jersey and Rockland County, NY. Figure 1 shows the location of the Basin. The drainage area is one of the major sub-watersheds of the Passaic River. The Ramapo River originates in the Village of Monroe, Orange County, NY, and flows southeasterly through Rockland County, into Harriman and then into Northern Bergen County, New Jersey. The Ramapo River officially ends at the Pompton Lakes Dam. The authorized project involves the construction of features for flood protection along the Ramapo River, Mahwah River, and Masonicus Brook in Mahwah, New Jersey and Suffern, New York. The authorized plan features extend a total of 13,000 feet along portions of the Ramapo

River, Mahwah River, and Masonicus Brook. The modifications include the widening and deepening of the channels, sheet pile walls, and bridge modifications. The project will provide protection to residential, commercial, and industrial developments in Mahwah and in Suffern. The non-federal sponsors of the project are the New Jersey Department of Environmental Protection (NJDEP) and the New York State Department of Environmental Conservation (NYSDEC).

The majority of the watershed is heavily urbanized (71%). Residential housing developments comprise the largest sub-category (50%). Undeveloped areas consist of forested areas, reservoirs, and wetlands along the river corridor (29%).

The Ramapo River and Mahwah Rivers Flood Control Project is authorized for construction under the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662).

5.0 REVIEW REQUIREMENTS

Initial Quality Control (QC) review has been handled within the Branch performing the work. Additional QC will be performed by the Project Delivery Team (PDT) during the course of completing the Feasibility Study. The detailed checks of computations and methodology should be performed at the District level, and the processes for this level of review are well established. Pursuant to EC 1105-2-408, item 2 c (2), Models used in the preparation of decision documents covered by this Circular will be reviewed in accordance with EC 1105-2-407, Planning Models Improvement Program: Model Certification. For this study, one or more spreadsheet-based economic models will be utilized, which would need to be reviewed consistent with the current certification procedures.

Pursuant to EC 1105-2-408, the General Reevaluation Report and EIS will need a full ITR team coordinated by the Planning Centers of Expertise (PCX) for Flood Damage Reduction Projects. It is recommended that the ITR be handled entirely within USACE, as the scope and level of technical complexity do not warrant an External Peer Review (EPR), based upon the initial Risk Screening Process conducted by the PDT noted in Section 9. The study is not controversial or precedent setting, nor does it have highly significant national importance so as to warrant risk abatement external peer review. As a result, the ITR will focus on:

1 Review of the planning process and criteria applied.
2 Review of the methods of preliminary analysis and design.
3 Compliance with authority and NEPA requirements.
4 Completeness of preliminary support documents.
5 Spot checks for interdisciplinary coordination.

6.0 REVIEW PROCESS

The ITR review process has not commenced; as stated above, the PCX for Flood Damage Reduction will coordinate this process. The review will cover key formulation and

benefit and cost assessment areas. Following completion of the draft General Reevaluation Report, which will be no earlier than the end of 2009, the major review process milestones will be those listed below:

1 Draft Report Review
2 Final Report Review

7.0 REVIEW COST

The final cost of the ITR is to be determined between the PDT and the PCX. It is assumed that any remaining documents to be reviewed will be transmitted electronically. Comments will be made and addressed in Dr. Checks. It is also assumed that the external ITR team will be working virtually. Only under extreme circumstances should the external ITR team, or a representative of that team, be required to travel to physically attend PDT or milestone meetings. The external ITR team should, with this constraint, participate in all remaining milestone meetings.

8.0 REVIEW SCHEDULE

The review schedule is as follows:

TASK	START DATE	FINISH DATE
Develop ITR Plan and post to Web Site, PCX	March 2008	March 2008
Identify Regional ITR resources and	TBD	
Recommend ITR Plan to PCX	TBD	
Sponsor Approves ITR Plan	indefinite	
Review of Models	N/A - standard	
Alternative Formulation Briefing		
Review of Draft Report	TBD	
Review of Final Report	TBD	

9.0 PROJECT RISK

The PDT has completed an initial risk assessment associated with this project based upon five factors and rated the project quantitatively among five levels of project risk of failure ranging from low to high (risk score class). The PDT scored each Project Risk Item in the Review Plan Score Guide (Table 9.1) and calculated an overall Average Project Risk Assessment Score. The exact values of the scores were not as important as compared to what risk score class (low, medium, or high) the Average Project Risk Assessment Score was classified as. Based upon the PDT analysis, the project is medium in risk because it did not receive an overall high risk score.

The PDT considered previous District project experience when making this analysis. No attempt was made to tie this to a national scale of rating. The Project Schedule and Cost

were assessed as a low degree of risk if they both remained flexible and a high degree of risk if the Project schedule and cost was fixed. Staff Technical Experience was assessed as a low degree of risk if the staff had a high level of beach erosion control and coastal storm damage reduction experience and a high degree of risk if the staff had a low level of experience. The results of the evaluation are tabulated as follows:

Table 9.1 Review Plan Score Guide

Project Risk Item	**Risk Assessment Score (Low Degree to High Degree)**					**Score**
	Low		Medium		High	
Project Complexity	1	2	3	4	5	3
Customer Expectations	1	2	3	4	5	3
Product Schedule/Cost	1	2	3	4	5	2
Staff Technical Experience	1	2	3	4	5	2
Failure Impact and Consequences	1	2	3	4	5	2
Average Project Risk Assessment Score						**2.4 (Low-Medium)**

10.0 REVIEW PLAN

The components of the review plan were developed pursuant to the requirements of EC1105-2-408.

10.1 Team Information

The decision document that will be the ultimate focus of the review process is the Ramapo and Mahwah River Basins, New York and New Jersey Flood Damage Reduction Study. The purpose of this feasibility-level study and associated EIS will be to guide the Corps' efforts to prevent flood damage and improve the ecosystem in the Ramapo and Mahwah River Basins, NY and NJ. This list provides the points of contact of NAN team members who are available to answer specific technical questions as part of the review process. The list also provides the names and organization of participating outside entities.

District Project Team Members:

MAIN REPORT PRODUCT	**STUDY TEAM MEMBERS**	**REVIEW TEAM MEMBER**

General Reevaluation Report Main Text	Jodi McDonald Team Leader CENAN-PL-F	All review team members will review this document internally External ITR: TBD
NEPA Documentation	Mark Burlas CENAN-PL-E	All review team members will review this document internally External ITR: TBD

Sections	**STUDY TEAM MEMBER**	**REVIEW TEAM MEMBER**
Plan Formulation	Jodi McDonald	TBD thru PCX
Economics	Johnny Chan	TBD thru PCX
Environmental	Mark Burlas	TBD thru PCX
Cultural Resources	Lynn Rakos	TBD thru PCX
Real Estate	Stanley Nuremburg	TBD thru PCX
Hydrology and Hydraulics	Roy Messaros	TBD thru PCX
Geotechnical/Structural	TBD	TBD thru PCX

10.2 Scientific Information

Based upon the self evaluation by the PDT, it is unlikely that the USACE study to be disseminated will contain influential scientific information. Influential scientific information is defined by the Office of Management and Budget as scientific information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions.

10.3 Timing

The ITR process will start upon coordination with the PCX--dependent on the completion of the draft feasibility study, which will be no earlier than the end of 2009.

10.4 External Peer Review Process

It is not anticipated that external peer review will be required. PCX and vertical team concurrence is required. Because we do not believe that EPR is indicated, we do not comment on whether the reviewers would receive report comments from the public. We do not expect there to be any influential scientific information, biological opinions, or model use other than previously certified models. We also believe that this is a low to medium risk and magnitude project, which would therefore, not require External Peer Review (as per EC 1105-2-408).

10.5 Public Comment

Public involvement is anticipated during the outreach phase between the draft and final feasibility studies. As these will not be completed until at least 2008, further public involvement activities have, therefore, not been scheduled at this time.

10.6 ITR Reviewers [This will be updated accordingly based on PDT and NAD negotiations.]

It is anticipated that four to five reviewers total should be available in the following disciplines: fluvial hydrology and hydraulics and design, economics, geotechnical, planning, environmental, cultural resources, and cost estimating. The reviewer contact information should be stated in Section 10.1 of this review plan. Cost estimating, as required by HQUSACE, review will be conducted by Cost Estimating Center of Expertise (NWW).

10.7 External Peer Review Selection

This will be determined conclusively in conjunction with the PCX and vertical team, if at odds with Section 10.4.